

U.S. Patent Application Serial No. 10/541,746
Response filed June 10, 2009
Reply to OA dated March 13, 2009

REMARKS

Claims 1-37 are pending in this application. No amendment is made in this Response. It is believed that this Response is fully responsive to the Office Action dated March 13, 2009.

Claims 1-18 are rejected under 35 U.S.C. §103(a) as being unpatentable over Baba et al. (WO 01/171415) in view of Shibata et al. (US 4,547,543), when taken with Katagiri et al. (JP 06-214197). For the purpose of examination, Baba et al. (U.S. 6,638,991) was used as the English translation of Baba et al. (WO 01/171415); an English machine translation of Katagiri et al. (JP 06-214197) was used. (Office action page 3)

Claims 19-26 are rejected under 35 U.S.C. §103(a) as being unpatentable over Baba et al. (WO 01/171415) in view of Shibata et al. (US 4,547,543), when taken with Katagiri et al. (JP 06-214197). For the purpose of examination, Baba et al. (U.S. 6,638,991) was used as the English translation of Baba et al. (WO 01/171415); an English machine translation of Katagiri et al. (JP 06-214197) was used. (Office action page 5)

Claim 27 is rejected under 35 U.S.C. §103(a) as being unpatentable over Baba et al. (WO 01/171415) in view of Shibata et al. (US 4,547,543), as applied to claim 26 above, and further in view of Valiant, JR. et al. (US 2002/0102415). For the purpose of examination, Baba et al. (U.S. 6,638,991) was used as the English translation of Baba et al. (WO 01/171415). (Office action page 7)

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Claim 28 is rejected under 35 U.S.C. §103(a) as being unpatentable over Baba et al. (WO 01/171415) in view of Shibata et al. (US 4,547,543), as applied to claim 26 above, and further in view of Hayashi et al. (US 6,503,632). For the purpose of examination, Baba et al. (U.S. 6,638,991) was used as the English translation of Baba et al. (WO 01/171415). (Office action page 8)

Claims 29-30 are rejected under 35 U.S.C. §103(a) as being unpatentable over Baba et al. (WO 01/171415) in view of Shibata et al. (US 4,547,543), as applied to claim 26 above, and further in view of Walther et al. (US 6,379,004). For the purpose of examination, Baba et al. (U.S. 6,638,991) was used as the English translation of Baba et al. (WO 01/171415). (Office action pages 8-9)

Claims 31-35 are rejected under 35 U.S.C. §103(a) as being unpatentable over Baba et al. (WO 01/171415) in view of Shibata et al. (US 4,547,543), as applied to claim 26 above, and further in view of Turek et al. (US 2002/0137811). For the purpose of examination, Baba et al. (U.S. 6,638,991) was used as the English translation of Baba et al. (WO 01/171415). (Office action page 9)

Claim 36 is rejected under 35 U.S.C. §103(a) as being unpatentable over Baba et al. (WO 01/171415) in view of Shibata et al. (US 4,547,543), as applied to claim 19 above, and further in view of Niwa et al. (US 5,516,467). For the purpose of examination, Baba et al. (U.S.

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6,638,991) was used as the English translation of Baba et al. (WO 01/171415). (Office action page 10)

Claim 37 is rejected under 35 U.S.C. §103(a) as being unpatentable over Baba et al. (WO 01/171415) in view of Shibata et al. (US 4,547,543), when taken with Katagiri et al. (JP 06-214197). For the purpose of examination, Baba et al. (U.S. 6,638,991) was used as the English translation of Baba et al. (WO 01/171415); an English machine translation of Katagiri et al. (JP 06-214197) was used. (Office action page 11)

The rejections are respectfully traversed, and reconsideration of the rejections is respectfully requested.

The compound (A) of the present invention has a polydimethylsiloxane structure, and this compound is not disclosed nor suggested in Katagiri et al. A silicone content (meth)acrylate as the B compound of Katagiri et al. corresponds to compound (C) of the present invention. Further, a compound which has a polydimethylsiloxane structure is described as an example of a “non-aqueous contact lens which does not have hydrophilic compound” in Katagiri et al. However, such a compound having a polydimethylsiloxane structure does not have good compatibility with another compound that has a high hydrophilic property, such as compound (B) of the present invention, because of its hydrophobic property. Therefore, it is difficult to obtain a contact lens material by mixing (or copolymerizing) a compound which has a polydimethylsiloxane structure and a compound which has a high hydrophilic property.

Further, generally speaking, phase separation or becoming clouded tends to occur when simply using a compound that has a polydimethylsiloxane structure with a hydrophilic monomer to obtain a contact lens.

In the present invention, the homogenous and adequate contact lens material is obtained by imparting a hydrophilic moiety such as a urethane bond in its structure and controlling the length of siloxane unit to be mixed thoroughly (or perfectly) with a compound with a pyrrolidone derivative such as N-MMP. Further, it is necessary to have a urethane bond in its structure to add an adequate strength to the contact lens and back up the poorness of wettability, which is peculiar to silicone material.

In respect to the three components, (i) a compound which has polydimethylsiloxane structure, (ii) pyrrolidone derivative and (iii) silicone content (meth) acrylate, common between the present invention and Katagiri et al., it is recited in claim 1 of the present invention that components (i) and (ii) are the essential components and component (iii) is recited in claim 13 of the present invention as an elective component. However, it is clearly disclosed that components (ii) and (iii) are the essential components for Katagiri et al.

The compound (A), which has polydimethylsiloxane structure, effectively improves the oxygen permeability of the contact lens material. In order to explain the effect of compound (A) for oxygen permeability, Applicant below presents a list of water content (WC) and oxygen permeability (Dk). The following table shows that the water contents of the present invention and Katagiri et al. are almost same. However, the Dk value of the present invention is not less than 51, but Dk value

of Katagiri et al. is not more than 35. This result clearly shows that using a compound (A) as in present invention improves the oxygen permeability.

Further, Katagiri et al. is described in the BACKGROUND ART of the present invention, and it is described that the contact lens material of Katagiri et al. being a target has a water content of about 37 to 58 % and an oxygen permeability of about 26 and 35, and it cannot be said that it has adequate oxygen permeability considering the wearing state at continuous wearing or at short sleep.

	Present Invention	Katagiri et al.
WC (%)	30-52	37-58
Dk	$51 \leq$	$35 \geq$

As described above, the contact lens material of the present invention obtained by using a specific pyrrolidone derivative and a compound which has a specific polydimethylsiloxane structure is adequate as a homogeneous and transparent contact lens material. Further, the obtained contact lens material has higher oxygen permeability than the prior art, Katagiri et al.

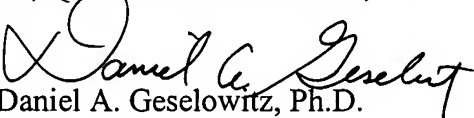
If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact the applicants' undersigned agent at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

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In the event that this paper is not timely filed, the applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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